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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/900,348 | 07/05/2001 | Jon B. Jansma | 33413 (LD11485/LD11496) | 4925 |

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PEARNE & GORDON LLP
526 SUPERIOR AVENUE EAST
SUITE 1200
CLEVELAND, OH 44114-1484

EXAMINER

KRISHNAN, SUMATI

ART UNIT PAPER NUMBER

2875

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,348

Applicant(s)

JANSMA, JON B.

Examiner

Sumati Krishnan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 4/10/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 is/are allowed.
- 6) ☒ Claim(s) 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION***Election/Restrictions***

Applicant's election of claims 1-13 in Paper No. 3 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 103

Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seuter (US 4544997) in view of Tateiwa (US 5417886).

Seuter discloses a mercury vapor discharge fluorescent lamp comprising a light transmissive glass envelope having an inner surface, means for providing a discharge, a phosphor layer (5) coated adjacent the inner surface of said glass envelope, and a fill gas of mercury and an inert gas sealed inside said envelope. Seuter does not disclose the phosphor comprising crystalline yttria particles in a concentration of 0.001-10 wt%. However, Tateiwa discloses a phosphor composition to be coated on the inner wall of fluorescent lamp envelopes having a composition with a concentration of yttria of 0.001-5 wt%. Tateiwa discloses that a phosphor layer having the composition disclosed has improved luminous flux characteristics. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the phosphor composition of Tateiwa in the invention of Seuter.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seuter (US 4544997) in view of Tateiwa (US 5417886) in further view of Labib (US 5268614). Seuter and

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Tateiwa together disclose the lamp according to claim 8, but do not disclose the phosphor layer being a rare earth triphosphor layer. Labib, however, discloses the use of a rare earth tri-phosphor as the phosphor layer. Labib discloses that tri-phosphor-coated fluorescent lamps have the advantage of well-resolved spectral lines, which provide better lighting to the human eye than standard cool-white halo-phosphate lamps, which have a broad spectral emission. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the tri-phosphor of Labib in the invention of Seuter and Tateiwa in order to provide better lighting to the human eye.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seuter (US 4544997) in view of Tateiwa (US 5417886) in further view of Matsuo (US 5869927). Seuter and Tateiwa together disclose the lamp according to claim 8, but do not disclose the phosphor layer of claim 10. Matsuo, however, discloses the phosphor layer comprising a yttria film coated over the surfaces of phosphor particles and inner surface of the glass envelope. Matsuo discloses that due to this, the amount of mercury sealed in the bulb is thus reduced. Because of the health hazards of mercury, the lower the amount of mercury present the better. Therefore, it would have been obvious to one of ordinary skill in the art to have used the phosphor composition of Matsuo in the invention of Seuter and Tateiwa to thereby reduce mercury levels in the bulb.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seuter (US 4544997) in view of Tateiwa (US 5417886) in further view of Jaspers (US 5666027). Seuter and Tateiwa together disclose the lamp of claim 8, but do not disclose the coating weight of the phosphor layer. Jaspers, however, discloses the coating weight of the phosphor layer to be

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2.5 mg/cm². It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the coating weight of Jaspers in order to have a lighter device.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seuter (US 4544997) in view of Tateiwa (US 5417886) in further view of Maloney (US 4079288). Seuter and Tateiwa together disclose the lamp of claim 8, but do not disclose the phosphor layer being a halophosphate layer. Maloney, however, discloses that a halophosphate layer is used as a phosphor layer in the fluorescent lamp disclosed therein. Halophosphate phosphor is less expensive and thus more economically feasible than other rare earth phosphors. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a halophosphate layer as the phosphor layer.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seuter (US 4544997) in view of Tateiwa (US 5417886) in further view of Roozkrans (US 5753999). Seuter and Tateiwa together disclose the lamp of claim 8, but do not disclose the lamp initially containing less than 5 mg of mercury. However, Roozkrans discloses a mercury discharge lamp containing 1 mg of mercury. Therefore, it would have been obvious to one of ordinary skill in the art to have used the mercury level of Roozkrans in the invention of Seuter and Tateiwa because of its lower dosage of mercury.

Allowable Subject Matter

Claims 1-7 are allowed. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record neither shows nor suggests the barrier layer containing crystalline yttria particles in the range from 0.1-10 wt%.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sumati Krishnan whose telephone number is 703-305-7906. The examiner can normally be reached on 8:00 am - 4:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 703-305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

SK
May 5, 2003


Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800